



The following article can be found in its entirety on the Software Technology Support Center Web site at <http://www.stsc.hill.af.mil/CrossTalk/crostalk.html>. Go to the "Web Addition" section of the table of contents.

Overview of the DII COE 4.0 Kernel

Sherrie Chubin, *DISA*
Dr. Thomas I. McVittie, *JPL*
Robert B. Miller, *JPL*

On April 2, the Defense Information Systems Agency (DISA) released version 4.0 of the Defense Information Infrastructure Common Operating Environment (DII COE). Since the release is only eight months away from the millennium, fielding systems on this new version of the COE becomes prohibitive because of the amount of time it takes to complete year 2000 testing. As a result, COE 4.0 was released as a "developer's release" or "beta release" so that the services and agencies have ample time to become familiar with the new version and to provide DISA with problem reports. By releasing COE 4.0 as a "beta release," more developers will be able to provide input to DISA to help to build a stable COE 4.1, scheduled for release in October 1999.

With the 4.0 release, a modified kernel architecture and many functional enhancements to COE provided the software dominate improvements found in this new version. The 4.0 kernel incorporates a number of new items that improve performance and provide for greater flexibility in configuring and deploying DII COE-compliant systems. These items require changes to how developers construct future segments, and how integrators, site administrators, and security managers interact with the system. 3.x segment formats will continue to be supported in the 4.x series, however, the new 4.0 kernel does provide new capabilities that a developer can opt to take advantage of for future segment development.

This paper provides an overview of the 4.0 kernel changes specifically addressing 1) account and profile management, 2) common data store, 3) services, 4) features, and 5) bindings. The amount of detail that is presented here is intentionally kept to a minimum so that the reader becomes familiar with the changes made and why they were made, not necessarily how to write software that relies on kernel services. Detailed documentation is available with the COE 4.0 release. ♦

What Have We Done for You Lately?

The Software Technology Support Center (STSC) provides hands-on, process improvement assistance in software acquisition, development, and sustainment to government organizations. If we have not helped you lately, perhaps it is time you tried one of our five specialties:

ASSESSMENTS. These can range from a quick Snapshot to a comprehensive Capability Maturity Model-Based Assessment for Internal Process Improvement. Assessments can help you know where you are so you can begin your process improvement efforts. All STSC assessments are led by Software Engineering Institute (SEI)-certified lead assessors.

PROCESS IMPROVEMENT. We can help develop a business case for process improvement. We can also guide the selection of the appropriate process improvement model and help implement the model.

SYSTEMS AND SOFTWARE ENGINEERING. Wherever you are in the system life cycle, we can offer assistance. Specialty areas include risk management, risk tracking, requirements engineering, object-oriented development, coding, testing, and software

quality assurance. We also have four SEI-certified Personal Software Process instructors on staff.

PROJECT MANAGEMENT. We offer project management training, counseling, and coaching based on the Project Management Institute's Project Management Body of Knowledge.

SOFTWARE ACQUISITION. If you listen closely to software developers at major conferences, you hear comments such as "How do they expect me to be a Level 3 developer when I have a Level 1 customer?" The STSC also helps those who acquire software to improve their acquisition processes.

Call the STSC for help in software process improvement at 801-777-7214 or DSN 777-7214 or send e-mail to spi@stsc1.hill.af.mil. We will discuss your needs and formulate a plan of action to help you on your way.

